Changes between Claritas 2026.1.1 and 2026.2.1

27th February 2026 to 17th November 2026
(Revisions 17951:18323, libclaritas 1696:1828, python 2471:2789)

Claritas is excited to deliver the new release 2026.2.1 to clients. This release again delivers a suite of innovative features designed to improve the user experience and boost your processing workflow.

As of August 2026, Claritas is now part of Ikon Science, following the merger of Petrosys Group into Ikon Science. While the company brand has changed, our commitment to Claritas remains the same, with continued development and support for the seismic processing community.

Technical support enquiries should continue to be directed to **support@petrosysgroup.com**, and general enquiries to **info@petrosysgroup.com.**

Claritas Release Schedule
As part of our ongoing alignment across the Ikon Science software portfolio, Claritas will move to a twice-yearly release schedule, with releases planned for mid-May and mid-November.

The next Claritas release is scheduled for May 2027.

We appreciate your support of Claritas and welcome your feedback as we continue to develop and strengthen the software.

Follow Claritas on LinkedIn to keep up to date with the latest news and information.

Release Highlights

- **FXINTERP2D** : New 2D trace interpolation module
- **SWATTEN2D** : New global surface wave (ground roll) attenuation for 2D lines (Beta), with **SWATTEN** for gather-by-gather attenuation
- **Tomo3D** : Works again on 2D lines binned as 3D, with estimation 4-10 times faster, smoother model topography and many fixes
- Many more features and enhancements to the new seismic viewer, including pseudotrace header displays, and PowerPoint presentations from all open windows
- A new **VelocityEditor** beta release; this will eventually be a complete replacement for isovels
- A rewritten installer with offline (air-gapped) installation, and multi-node MPI that works out of the box

Changes that may need action when you upgrade

Most of this release needs nothing from you. The items below are the exceptions; each is described further on.

- **Tomo3D velocity files** : .isegy velocity files written from 3D geometries by 2026.1.1 are wrong and should be re-saved. Runs made with 2025.2.1 to 2026.1.1 from a starting velocity file trimmed to the topography, on a model with a non-zero Azimuth, used the wrong starting velocities and should be re-run. See “Please note” in the Tomo3D section.
- **VIBCORR** : if a flow renumbers CHANNEL after VIBCORR (e.g. CHANNEL-1) to correct the channel shift when the sweep is read from an auxiliary trace, remove that step. VIBCORR now numbers the channels correctly, so the workaround would shift them the other way.
- **READSEGY 1-byte fields** : data read by 2026.1 with a DEFFILE that has a 1-byte integer field may hold wrong values in that header. Read the SEG-Y again with READSEGY.
- **List parameters** : a list parameter that cannot be read (a typing error, a range written backwards such as 200:100, too many values, or a %FILE that cannot be opened) now stops the job with an error. A job that ran before with such a list will stop until the list is corrected.
- **RLM v18 licensing** : if you run your own RLM v17 licence server, you should upgrade it to v18 with the claritas-license-server package from this release.

Supported platforms

Supported platforms for 2026.2.1 are:

- **RHEL 8/9, AlmaLinux 8/9**
- **Ubuntu 22.04 and 24.04,**

and on Windows via,

- **Windows Subsystem for Linux (WSL1/WSL2)**

FXINTERP2D - a new 2D trace interpolation module

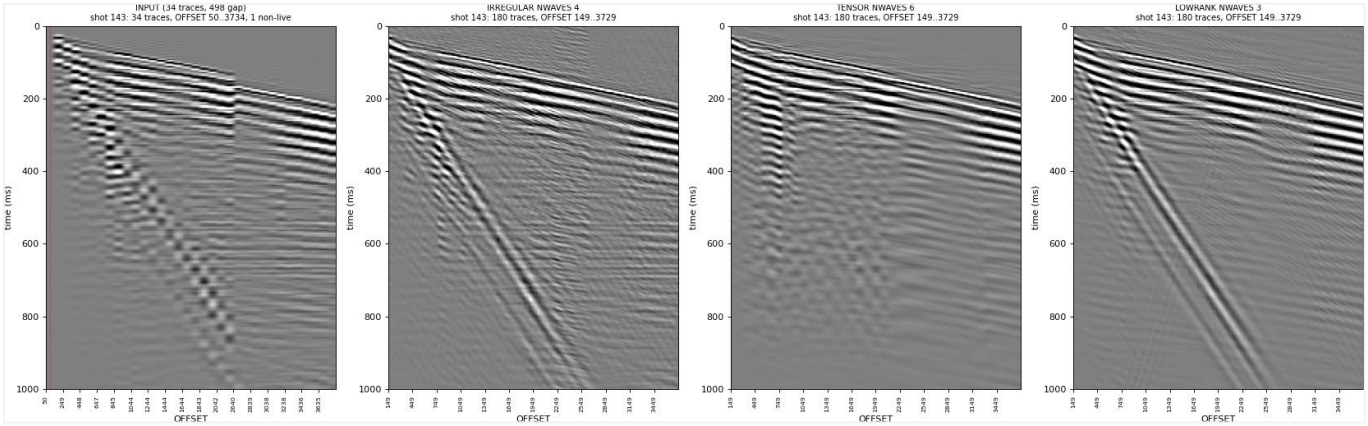
The FXINTERP2D process module interpolates and regularises traces within 2D gathers. It can fill gaps, double the trace density, or output traces at arbitrary positions. Six methods are available:

- SPITZ: regularly sampled input; inserts a trace midway between each pair. IRREGULAR: irregular input and/or arbitrary output positions (filter-based). TENSOR: dip-steered low-rank model; handles larger gaps and wider gathers. LOWRANK: suits strongly curved events across a wide gather.
- MWNI: minimum weighted-norm interpolation (Liu & Sacchi); needs

genuinely irregular sampling.

- MSAR: multistep autoregressive (Naghizadeh & Sacchi); for spatially aliased or under sampled input.

OUTPUT=STRICT honours the input traces closely; OUTPUT=RAW returns the model.



FXINTERP2D - A shot gather with a gap (left), regularised to a fine, even trace spacing by the IRREGULAR, TENSOR and LOWRANK methods

Only live traces (TRTYPE=1) are used, and a gather that cannot be interpolated is passed through unchanged, with a warning. The standard trace headers are interpolated for the new output traces; other headers (SPARE1 to SPARE4, user-defined headers and pseudotraces) are zero on output. Output positions outside the range of the input positions are not extrapolated. The module documentation includes a guide to choosing a method.

SWATTEN2D and SWATTEN - attenuation of coherent surface waves

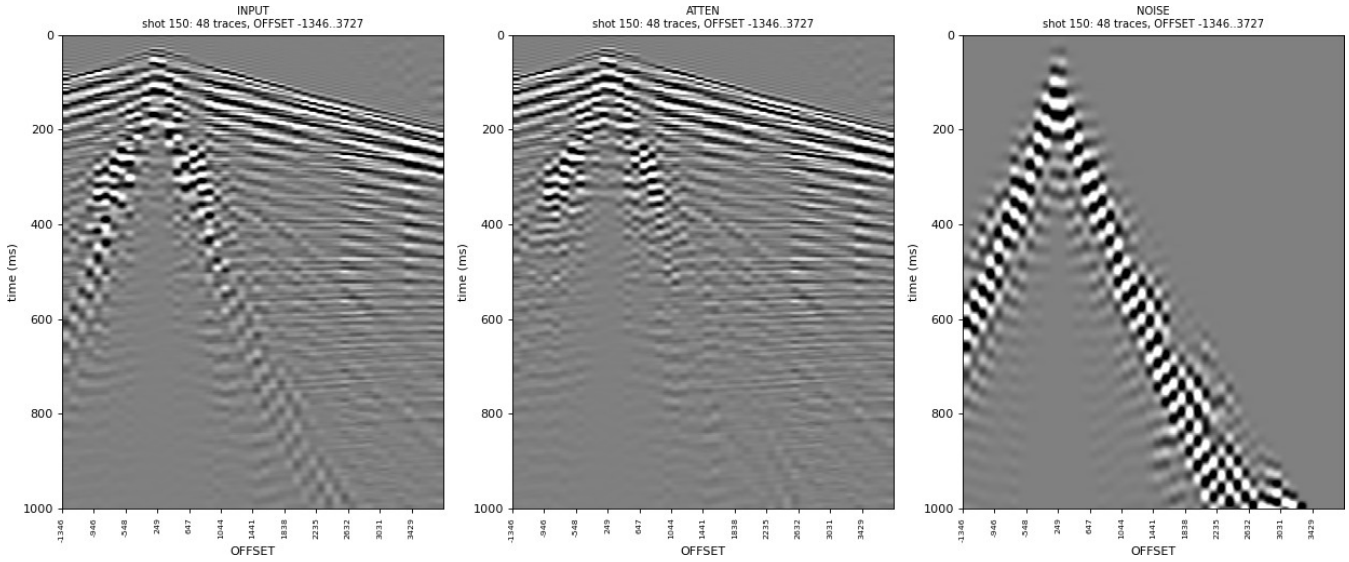
Two new modules attenuate coherent surface waves (ground roll).

The SWATTEN2D process module estimates the surface waves over the whole 2D line, rather than one gather at a time. It uses neighboring shot gathers to model the surface waves, including their dispersion, fits the estimate to each gather, then adaptively subtracts it. Estimates are saved, so the output parameters can be changed without re-running the whole estimation. It runs multi-threaded. The input is a 2D line with geometry applied, and SWATTEN2D must be the only module (other than SEISJOB) in the job. Released as a beta: it has been tested on a limited range of data and we welcome feedback.

The SWATTEN process module works on one gather at a time. It models the surface waves in each gather with the same dip-steered model as FXINTERP2D's TENSOR method, restricted to the slow velocities, then adaptively subtracts them. Only the

surface-wave velocity is required: a single VELOCITY value drives everything. The input to SWATTEN is 2D gathers in trace-position order with the position header (HEADER parameter) populated on every trace, and ensembles delimited by the LASTTR trace-header flag.

In both modules, OUTPUT=NOISE outputs the surface waves that were removed, for QC.



SWATTEN - A shot gather before (left) and after (centre) attenuation, and the surface waves removed (right)

HRSTATICS - module rewritten

The high-resolution marine statics module has a new solver. It jointly estimates sea-floor depth on a grid, average depth of each streamer channel, water velocity (optional) and short-wavelength cable/source undulation. Outlier picks are progressively down-weighted. It now uses multiple processors, has better QC plots and a corrected velocity estimate. Output headers are HRSTATICS_SRC, _REC, _TOTAL, _REPICK and _ADJPICK.

Tomo3D - faster estimation, 2D lines and many fixes

A client reported that Tomo3D failed on a 2D line binned as a “dummy” 3D (a single crossline), stopping with “Error setting up grid info (4)”. Fixing this led to a thorough overhaul of the application.

Faster estimation

Each iteration is now 4-10 times faster. On a client’s 2D line with 1 m cells, an iteration

went from 160 s to 18-36 s on one thread, and from 34-39 s to 3-6 s on eight threads. Results are unchanged apart from rounding. The gain is largest when the spreads are short compared with the model.

Changes that affect results

- The model topography is now a smooth surface fitted through the pegs. It differs from before, most of all on 2D lines and with coarse cells.
- Sources and receivers that are not at pegs are now always inside the model and below its surface.
- De-weighting now treats early picks the same as late ones. Previously only late picks were de-weighted.
- Picks that cannot be given a travel time, picks whose shot or receiver peg is not in the geometry, and pick times that are negative or not a number, are now left out. Tomo3D warns how many.
- With model topography, the travel-time derivatives are now exact for receivers on or near the surface. In synthetic tests the final RMS misfit fell from 1.97 to 1.63 ms on a 2D line, and from 1.43 to 1.40 ms in 3D.
- Starting velocities from velocity files: gaps between the files' *Top* and *Bottom* ranges are now interpolated, and functions are placed correctly when *Top* is above the model.
- An HDF5 geometry with a COORD_SCALE or HT_SCALE of 0 is read as unscaled, rather than as multiplied by 0.
- *Damping* can no longer be 0; the minimum is 0.0001.

Changes in use

- Velocity file *Top* and *Bottom* can be edited again, and their defaults follow the loaded picks.
- On the Model tab, values are applied on Enter, on leaving the box or on changing tab, rather than on every keystroke. Problems are shown in red, and the *Iterate* tab is unavailable until they are fixed.
- Any *Resolution* down to 0.01 m can be set, and Tomo3D warns before a run that needs more memory than is free.
- *Height* is now called *Length*, and *Reset Horizontal* is now *Fit Horizontal*.
- Esc no longer closes Tomo3D, and closing it with runs in the list asks for confirmation.
- A *Number of Iterations* of 0 builds only the starting model, which can then be viewed or used for statics.
- The *Results* tab can be viewed while *Auto* runs.
- *Add Velocity* now lists Tomo3D's own .gsegy and .isegy files.
- *Export Topo* writes 10 significant figures. It wrote 5 before, which could be up to 50 m out with 7-digit coordinates.

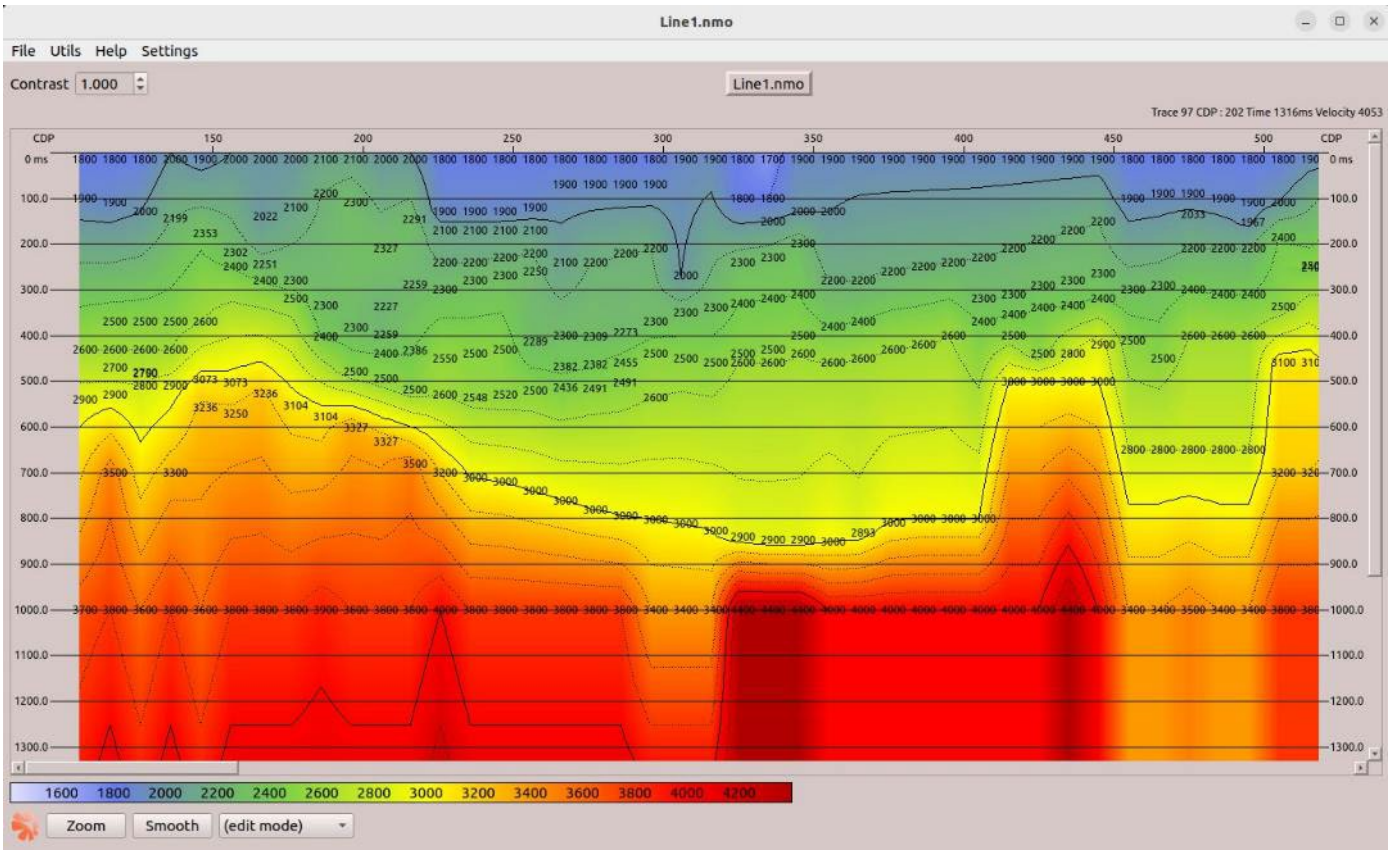
The Tomo3D manual (see Tomo3D Overview) has been revised throughout.

Please note

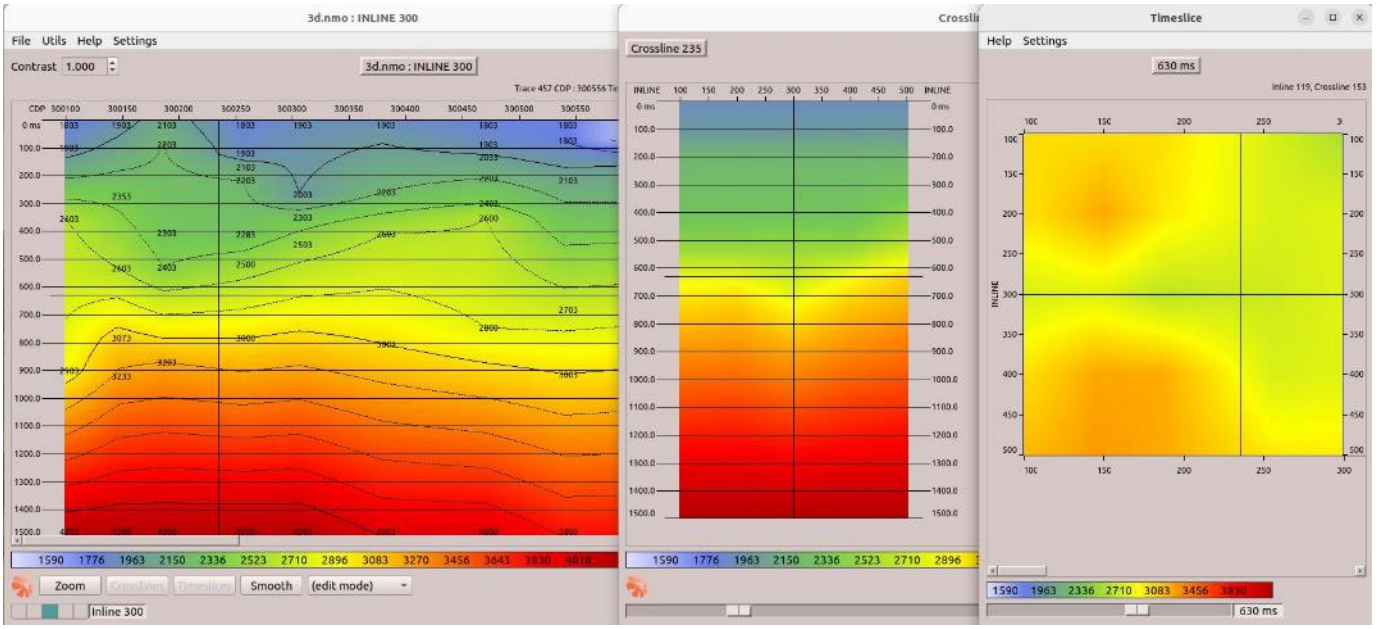
- **.isegy velocity files from 3D geometries written by 2026.1.1 are wrong.** Each bin's velocity and X/Y were taken from the wrong place in the model (about 250 m off in our test); the INLINE and CROSSLINE headers are right. To re-save one, add the run's .gcv as the velocity file, keep the same model, press *Start* with *Number of Iterations* 0, and *Save Velocity* as .isegy.
- **Starting velocities trimmed to the topography used the wrong pegs whenever the model Azimuth was not 0** (velocity files, with topography on). The default model has been rotated since 2025.2.1, so most such runs made with 2025.2.1 to 2026.1.1 are affected.

New Velocity editor (beta)

This release includes the first iteration of a PyQt-based stacking velocity model editor, which will eventually replace the old isovels application.



The VelocityEditor is based on the new SeisViewer, so can display 3D velocity models in crossline and timeslice views. A range of velocity formats (nmo, 2D SEG-Y, Promax etc) can be input, edited, and smoothed; 3D SEG-Y velocities are not supported yet. More features (Vrms to Vint conversion, re-gridding and re-picking, etc.) will be added in the coming releases.



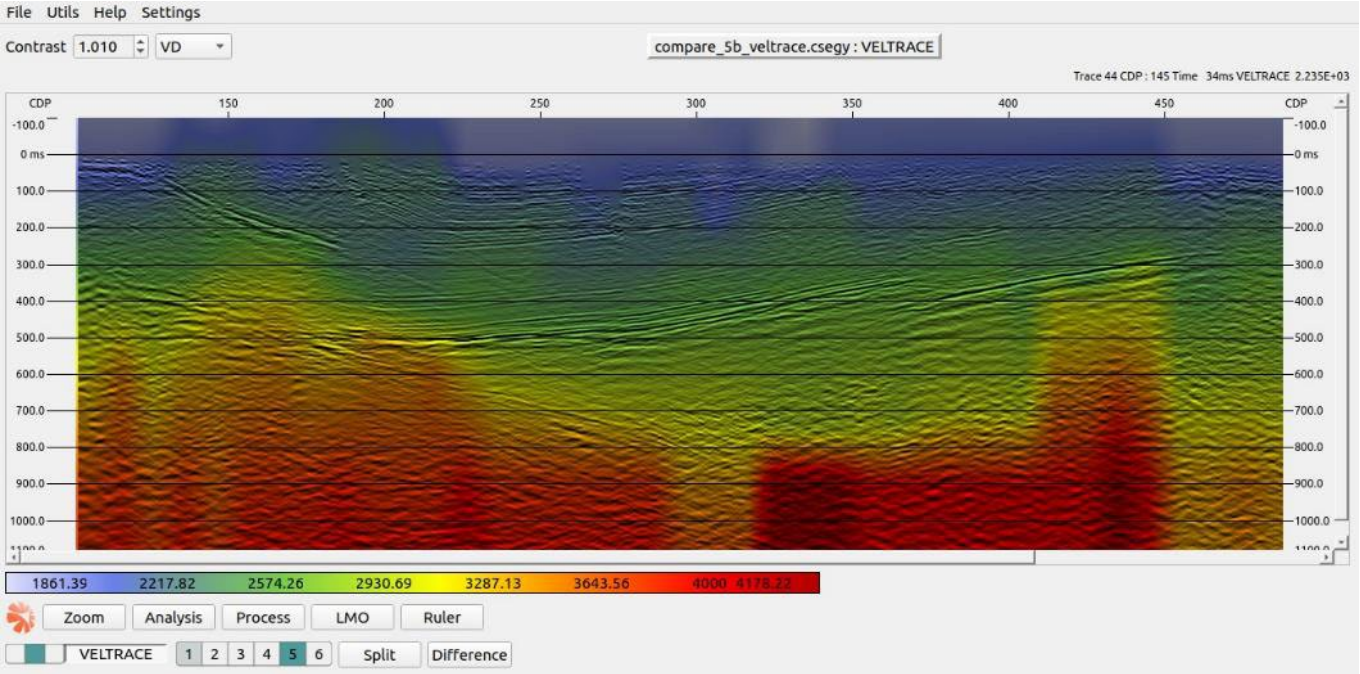
Velocity functions and picks can be added, moved, edited and deleted. These edits are journalled, so that they can be recovered with the cva_recover utility. Utilities are provided to delete bad picks, scale the velocities, and add or change the bottom velocity. A model can be smoothed (running mix, median or low-pass filter), with the smoothed result shown as a new panel for comparison. Isovelocity contours and velocity annotation can be overlaid, and several 2D or 3D models can be loaded and compared. See VelocityEditor : Display and edit velocity models for details.

The VelocityEditor can be launched from the Velocities tab of the launcher, or from SeisCat when right-clicking on an NMO file.

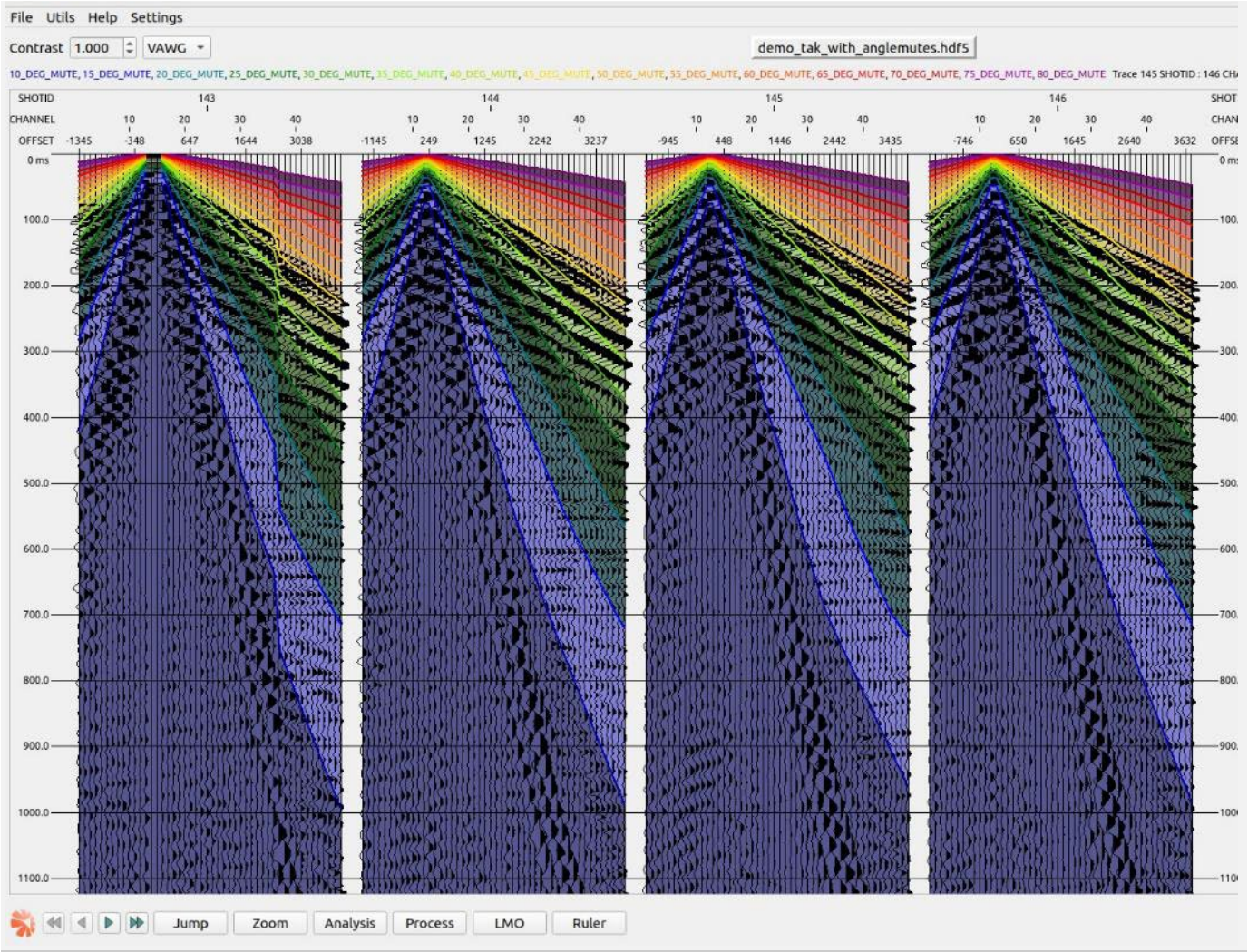
New features in SeisViewer

- We have added a slide-show feature, which places screenshots of all currently open SeisViewer windows into a *.pptx file. The screenshots include all header overlays and graphs, crossline, analysis-zoom and timeslice windows. For 3D input, the user can specify which inlines and crosslines to include in the PowerPoint output, and the slides can show either the entire section or only the part that is visible. This feature is available from the Utils menu.
- Pseudotraces may now be displayed within SeisViewer, if present in the input files (including HDF5 inputs). The pseudotrace display can be off, on, or merged. The merged display shows the seismic amplitude, but coloured by the pseudotrace values. If pseudotraces are requested on a 3D volume, they are automatically added to any crossline, timeslice and zoom windows, as well as the main inline window.

  When pseudotraces are displayed, another (source) chooser bar is added; in the example below, the VELTRACE header is being used to colour-code the seismic display with the stacking velocities :



- The Qseis window can now be launched from the SeisViewer file menu, giving easy access to the input file header and history. Separate qseis windows can be opened for each input file, to make it easy to compare input file headers.
- The header overlay feature has been extended to allow fill under the lines, so that multiple angle-mutes can be easily displayed. Angle-mutes can be quickly displayed by pressing Ctrl-A - this looks for xx_DEG_MUTE trace headers (as would be created by the ANGLEMUTE module), and displays them with a preset list of line and shading colours



- The font size can now be controlled within the SeisViewer : Ctrl-scrollwheel on the seismic still rescales the seismic display (hscale,vscale), but Ctrl-scrollwheel on the surrounding areas (text, timelines, buttons etc.) will control the font size, and will affect all SeisViewer windows.
- Recent SeisViewer updates will make it easier to compare input seismic files from different vintages, and with different file header settings. In particular, SeisViewer can now cope if some of the input files have missing shots - those shots will be skipped (from all files) when navigating throughout the input data.
- Difference displays now work on 3D volumes, for inline, crossline and timeslice panels.
- On-the-fly processing is now also applied to any zoom windows.
- The user can now specify the time of the first sample (T-zero), for situations where the seismic trace start time is non-zero.
- Double-click on the colourbar now toggles between a normal colour-bar, and a coloured histogram, showing the seismic amplitude distribution.
- User-specified reference amplitudes on the inline window are now passed on to new crossline and timeslice windows.
- The right-mouse button popup menu has been simplified.
- The scrolled-seismic region centre-point is now preserved across a re-display
- The frequency spectrum graph settings form now lets you control the frequency axis labelling.
- Trace headers with a constant value are now graphed, instead of being left out.

- The default trace header labels now follow the sort order of the file (e.g. CDP and CDPTRACE for CDP-sorted data).
- The left and right arrow keys now step through the input files, when they are not being used to move between pre-stack ensembles.
- The ruler line is now thicker, and the box giving the ruler's velocity and time intercept stays on screen until the next click.
- If the sort code of an input file needs to be set, SeisViewer now offers to launch Qseis to update it.
- Escape now cancels a zoom, analysis or ruler request that is waiting for its click. Otherwise, Escape or Ctrl-C asks for confirmation before closing SeisViewer and all its windows.
- Opening the Crosslines window is now refused, with a message, when it would need more memory than is available.

Installer rewrite and offline (air-gapped) installation

The Claritas Install.sh has been cleaned up and rewritten. There is now a supported two-stage install for machines with no internet access:

- Run prepare_offline.sh on the target machine.
- Collect the required packages on a connected machine.
- Install on the air-gapped machine.
- README_install documents the process.

Other changes to installation:

- Install.sh can be run again to repair an install.
- A beta and a release now install side by side, and an upgrade removes only the version it replaces.
- An upgrade now carries across everything the site has added to, or changed in, the previous version's local folder, rather than a fixed list of files. Site configuration files (queues, plotters and the like) keep the site's copy, with the new version beside it as <name>.new if that has changed too. Files that we maintain (link_options, templates, Xdefaults_sample and README) take the new version, with the site's copy beside it as <name>.old.
- The $GNS_HOME/local folder now has the sticky bit set. Users can still add files there, but only an administrator (or a file's owner) can change the installed configuration files. On RHEL/AlmaLinux these files were world-writable in 2026.1.

Multi-node MPI with OpenMPI now works out of the box

clstart now passes GNS_HOME, PYTHONPATH and RLM_LICENSE to MPI ranks on remote nodes. On RHEL/AlmaLinux it also tells OpenMPI where its remote daemon is. Users no longer need to edit .bashrc on each node to run a job across a cluster.

RLM licensing upgraded to version 18

The Claritas licence client and the claritas-license-server package now use RLM v18.0. Customers who run their own v17 licence servers should upgrade them.

Minor improvements

- HiresQC is now also available as a processing module, the HRQC process module, for production QC of high-resolution marine data from a job. It writes the HRQC_PRIMARY, HRQC_GHOST, HRQC_DELAY, HRQC_FIT and HRQC_DEPTH headers to the input file. MIN_DELAY may now be zero, which allows ghost delays down to one sub-sample.
- The HRDEGHOST module and the HRQC process module now give the same result on every run, whatever the number of cores. Previously the results varied slightly from run to run.
- In the geometry application, the streamer offset origin field (which can be set to “Gun” or “Navpoint”) now remembers the previous value set.
- The K3D 3D depth migration module has a new REGIONS parameter to divide the migration volume manually, which can reduce memory use and run time. The anti-aliasing is also faster and more robust.
- The PROBPICK module now has an advanced option to write the pick probabilities to a file, for use in later processing (e.g. constraining the primary position).
- Python HDF5 modules (HRQC and others using the Claritas HDF5 library) now read and write processing history in the output file.
- The FKFILTER, FKKFILTER, FXYDECON and HRDEGHOST modules now write a banner line to the job log, and their parameters to the processing history. FXYDECON and HRDEGHOST no longer end every job with a “did not connect to the supportfiles table” warning.
- The FXYDECON module is faster on Ubuntu, where its solves were running 2-3 times slower than necessary with an OP_HWIDTH of 4 or 5.
- A list parameter that cannot be read (a typing error, a range written backwards such as 200:100, too many values, or a %FILE that cannot be opened) now stops the job with an error. Previously the job carried on with whatever could be read. In refstat and refstat3d, an unreadable “fixed interfaces” or “fixed layers” list now gives a message and returns to the form, instead of running the inversion with nothing fixed.
- clstart now checks the shell it is about to open and gives a warning, with the required fix, when it will not work. Typical causes are a different python3 first on PATH (e.g. conda), login scripts changing GNS_HOME or PATH, or a job that cannot be linked. The new ‘clcheck --full’ command runs a fuller set of checks and prints a report to send to support.

- MPI jobs on a node that cannot reach the licence server now show one clear error message, instead of repeated messages about failing to start the licence manager.
- Job Editor : The MPI and queue forms now use OpenMPI terms throughout. “MPICH3 execution parameters” is now “MPI run parameters”. Forms say “Hostfile” instead of “mpd.hosts” and “Number of ranks” instead of “Number of cores”. The unused hostfile field has been removed from the SLURM form.
- Job Editor : The File menu has a new “SaveAs & Open” item, which saves the job under a new name and opens it in a new Job Editor.
- In the launcher, Raptor has been added to the Velocities tab and FBQC to the Statics tab. The old seisview application is now labelled “View Seismic (old)”, and is no longer on the

  Seismic Data tab.
- The VIBCORR module behaviour has changed with regard to CHANNEL and header association. An existing bug could cause (eg) channel 3 to contain the data for channel 2, and for the last output channel to be dropped, when reading the sweep from an auxiliary trace. Any flows that worked around this by (eg) renumbering CHANNEL to CHANNEL-1 after VIBCORR, should now remove those workarounds. When the input has fewer traces than the output, the padded output traces are now marked as dummy traces (TRTYPE=3).
- On RHEL/AlmaLinux, an internal error in a graphical application no longer aborts the application. The error is printed and the application carries on, as it already did on Ubuntu.
- The installation, setup (including a new licensing section), MPI, SLURM, cluster, ssh keys and Job Editor chapters of the manual have been brought up to date.

Bugs found and fixed

4423:: New icons have been installed for the new SeisViewer, VelocityEditor, Tomo3D, Raptor and AI-FBQC.

4426:: The ADDP190 module now has a FORCE_FORMAT parameter, to let the module continue if the H202 (format) line is missing from the P1/90 input.

4427:: The NAVHDR module was failing if asked to create location coordinate trace headers, but they already exist

4435:: The HiresQC application and the HRDEGHOST module failed when built with Cython 3.

4443:: Two issues with the K3D module (excessive number of temporary files; crash if coordinate outside velocity grid) were fixed.

4444:: SeisViewer: the whole-trace balance in the on-the-fly processing used the square of the samples, rather than their absolute value.

4451:: The VIBCORR module was dropping one trace when reading the sweep from an auxiliary trace

4454:: The Edit mode button in Qseis had stopped working due to a recent change

4455:: The SeisViewer stack-type is now determined from more traces, to avoid a 3D being mistaken for a 2D (with unchanging INLINE value)

4459:: The Statics & Flatten features had ceased to work in the sv module due to changes arising from the new SeisViewer. Fixed

4469:: The JCS documentation around curly- or angle-brace variables has been clarified

4477:: SeisViewer: the mouse wheel did not scroll the seismic on RHEL/AlmaLinux 8 and 9, and repeated zooming made the aspect ratio drift.

4507:: READSEGY/WRITESEGY: a 1-byte integer field in a DEFFILE gave an "Invalid datatype name" message and could be read wrongly. It is now read as a number from 0 to 255 and written back as one byte. Files with such a field written by 2026.1 should be re-read with READSEGY.

4525:: Updating the MPISTART documentation so that the mpd.hosts example is correct for OpenMPI.

4529:: The filename button in Qseis was not working.

4533:: 'clstart' now tests the shell it is about to open and warns, with the required fix, when it will not work.

4533:: 'clstart' could exit the user's shell or terminal in some error cases.

4551:: SLURM job submission from the Job Editor had stopped working.

4557:: A code review of this release found and fixed a number of smaller problems in SeisViewer, CVA, XSJE and SEG2SEGY.

4557:: SeisViewer: a zoom window's Save to SEG-Y wrote a broken file. The first trace was lost, the end of the file was not written until SeisViewer exited, and LINE and REEL were not renumbered. A file that cannot be created now gives a warning.

4557:: SeisViewer: with 3D data, difference panels or FK invert windows, header overlays on panels other than the first drew LINE instead of the chosen header, and zoom windows could show and save another file's trace headers.

4557:: SeisViewer: an FK invert window made from a panel other than the first showed the first file's trace headers, and Invert on an FK zoom of the 3D Crosslines window failed.

4559:: FKFILTER silently truncated an ensemble larger than EX_FOLD or EX_NSAMP, and the job failed later. It now stops with a message saying what to set.

4561:: HRDEGHOST: a long list of pseudotrace or float header names could overflow a buffer and crash the job.

4588:: Building a job could give a large number of Fortran compiler warnings. These are now suppressed.

4590:: FBQC aborted on exit on Ubuntu 22.04, and its "Use GPU" option had no effect because GPUs were hidden from the application.

4591:: SeisViewer: in variable density mode, several shots displayed

together could all show the first shot's data.

4592:: XVIEW: Flatten now overrides LMO and statics, rather than adding to them.

4593:: SV: an input file given on the command line could be replaced by a blank file name from the saved settings.

4597:: Tomo3D failed with "Error setting up grid info (4)" and NaN coordinates on a 2D line binned as a dummy 3D (one crossline), and could hang while gridding its topography.

4597:: Tomo3D: the .isegy velocity export took each bin's velocity and X/Y from the wrong place in the model for 3D geometries, and wrote an empty file, or failed, for some 2D geometries.

4597:: Tomo3D aborted with "double free or corruption" on Start at some resolutions when a velocity file was used, and could crash when two pick files were loaded together.

4597:: Tomo3D: Statics Write failed with an OverflowError when a station was above the modelled velocities.

4597:: Tomo3D: with Topography -> Model unticked, the 1-D start, the velocity slices and Save Topography failed.

4597:: Tomo3D: an error while starting or iterating left the window disabled. The error is now shown.

4597:: Tomo3D: a pick above the model topography, or with a bad pick time, could make the velocities invalid or stop the run from finishing.

4597:: Tomo3D: several memory leaks were fixed, and the window no longer freezes for about 2 s per .pic file after every run.

4597:: SEG-Y rev 1 files written by Claritas applications (e.g. Tomo3D's .isegy and .gsegy) had random values in trace header bytes 197-240.

4597:: A program holding more than one licence could carry on without a licence after the licence server went down, once another of its licences had been released.

4597:: The Geometry program and qgeom printed a wrong 3D CDP easting maximum and northing increment.

4600:: IMAGE_K3D: anisotropic travel times were badly wrong for epsilon below about -0.19, and slightly wrong at strong velocity contrasts.

4601:: SEISREAD could not read a key list from a file (%FILE) unless the file's path was all in capitals.

4601:: SEISREAD crashed when PKEYNAME, SKEYNAME or TKEYNAME was a 16-bit or 8-bit integer header, e.g. a 2-byte DEFFILE field from READSEGY.

4601:: QSEIS crashed when listing a byte (CHAR or UCHAR) trace header from an HDF5 file.

4601:: The SCINTREX SEG-1 reader never read the source and receiver Y coordinates or elevations.

4601:: SeisViewer: zoom and analysis windows opened on any panel but

the first could show the first panel's data, and the amplitude spectrum "All panels" option failed.

4601:: SeisViewer: the colourbar was not updated when processing was switched on or off.

4601:: SeisViewer: trace headers held as 16-bit integers, bytes or text showed no value in the header labels, and the header graphs and text zoom failed.

4601:: SeisViewer: zoom and analysis windows grew wider the first time the mouse moved over them, and legend boxes in the spectrum and histogram windows cut off their longest lines.

4603:: Job Editor: the space bar could start the job by accident, because the Run or Submit button kept the keyboard focus.

4606:: SeisViewer: memory use no longer grows each time you move to another ensemble.

4607:: REREAD with HEADERS=Only failed on HDF5 files ("Error reading trace data") and zeroed the trace samples of CSEGY files. A REREAD file whose trace length differed from the job's aborted the job or gave wrong samples. REREAD now keeps the job's trace length, with zeros after the end of a shorter file's traces.

4608:: REREAD: the trace headers it adds from its file could carry another trace's values on traces that are not in the file. They are now zero.

4609:: SEISREAD (V2) passed on only the start of an HDF5 file's 3200-byte text header. The rest, including the history section, was filled with leftover memory contents in the DISCWRITE and SEISWRITE output.

4610:: REREAD did not copy a UINT4 trace header (e.g. DUPLICATES) from a CSEGY file, and printed "Invalid buffer datatype UINT4" for every trace.

4611:: REREAD with HEADERS=No zeroed a trace that is not in its file but left it live, so later modules such as STACK used it as data. It is now flagged dead, as the help says.

4612:: DISCWRITE with TRLENGTH left SAMP_NUM at the shortened length for the modules after it, although the traces kept their full length.

4615:: Job Editor: a job control set using only a JCS_TXT_FILE could not run with SEISJOB's default JCS_TAIL ("The SEQnum variable could not be found"), and its first Set Links or Edit JCS did nothing.

4618:: SeisViewer: changing the number of ensembles per display while on-the-fly processing was switched on gave a series of errors.